

GRC BIBLIOGRAPHY

1. Handschuh, Robert F.: *Recent Advances in the Analysis of Spiral Bevel Gears*, NASA-TM-107391, ARL-TR-1316, Presented at Intl. Conf. On Mech. Trans. and Mechanisms, Tiajin, PR of China, July 1-4, 1997.
2. Townsend, Dennis P: *Gear and Transmission Research at NASA Lewis Research Center*, NASA-TM-107428, ARL-TR-1339, Presented at Congresso Internazionale della Trasmissione di Potenza '97, Milano, Italy, June 10-11, 1997
3. Litvin, F., Lu, J., Townsend, D.P., and Hawkins, M: *Computerized Simulation of Meshing of Conventional Helical Involute Gears and Modification of Geometry*, NASA-TM-107451, ARL-TR-1370, July 1997.
4. Jammu, Vinay B., and Danai, Kourosh: *Diagnostic Analyzer for Gearboxes (DAG): User's Guide*, NASA-CR-4762, ARL-CR-333, January, 1997.
5. Litvin, Faydor L. and Lu, Jian: *New Methods for Improved Double Circular-Arc Helical Gears*, NASA-CR-4771, ARL-CR-339, July, 1997.
6. Cook, Thomas A., and Consolini, Michelle A.: *Cost Benefit Analysis of a 9-Centistoke Lubricant for Helicopter Transmissions*, NASA-CR-204144, ARL-CR-340, August, 1997.
7. Lewicki, D.G. and Ballarini, R.: *Effect of Rim Thickness on Gear Crack Propagation Path*, ASME Journal of Mechanical Design, Vol. 119, No. 1, Mar 1997.
8. Bibel, George D., and Handschuh, Robert F.: *Meshing of a Spiral Bevel Gear Set With 3D Finite Element Analysis*, Gear Technology, Vol. 14, No. 2, pp. 44-47, Mar/Apr 1997.
9. Lewicki, David G. and Ballarini, Roberto: *Gear Crack Propagation Investigations*, Gear Technology, Vol. 14, No. 6, pp. 18-24, Nov/Dec 1997.
10. Lewicki, David G. and Ballarini, Roberto: *Rim Thickness Effects on Gear Crack Propagation Life*, International Journal of Fracture, Vol. 87, pp 59-86, 1997.
11. Litvin, Faydor L: *Development of Gear Technology and Theory of Gearing*, NASA RP-1406, ARL-TR-1500, Dec 1997.
12. Krantz, T., and Delgado, I.: *La Ripartizione del Carico Nelle Transmissioni*, Organi Di传missione, Nr. 1, Jan 1998.
13. Oswald, Fred B., Townsend, Dennis P., Valco, Mark, J., Spencer, Robert H., Drago, Raymond J., and Lenski, Joseph W., Jr.: *Influence of Gear Design on Gearbox Radiated Noise*, Gear Technology, Vol. 15, No. 1, pp. 10-15, Jan/Feb 1998.

14. Jammu, V.B., Danai, K., and Lewicki, D.G.: *Structure-Based Connectionist Network for Fault Diagnosis of Helicopter Gearboxes*, ASME Journal of Mechanical Design, Vol. 120, No. 1, pp. 100-105, Mar 1998.
15. Jammu, V.B., Danai, K., and Lewicki, D.G.: *Experimental Evaluation of a Structure-Based Connectionist Network for Fault Diagnosis of Helicopter Gearboxes*, ASME Journal of Mechanical Design, Vol. 120, No. 1, pp. 106-112, Mar 1998.
16. Savage, M., Rubadeux, K.L., and Coe, H.H.: *Effects of Planetary Speed-Reduction Ratio on Mean Service Life*, ASME Journal of Mechanical Design, Vol. 120, No. 1, pp. 113-118, Mar 1998.
17. Savage, M., Rubadeux, K.L., and Coe, H.H.: *Effects of Planetary Speed-Reduction Ratio on Mean Service Life*, Gear Technology, Vol. 15, No. 4, pp. 24-29, Jul/Aug 1998.
18. Litvin, F., Wang, A., Handschuh, R.: *Computerized Generation and Simulation of Meshing and Contact of Spiral Bevel Gears with Improved Geometry*, Journal of Computer Methods in Applied Mechanics and Engineering, No. 158, 1998, pp. 35-64.
19. Zakrajsek, J.J., and Lewicki, D.G., "Detecting Gear Tooth Fatigue Cracks in Advance of Complete Fracture", TriboTest Journal, Vol. 4, No. 4, Jun. 1998, pp. 407-422.
20. Lewicki, D.G., and Ballarini, R., "Gear Crack Propagation Investigations", TriboTest Journal, Vol. 5, No. 2, Dec. 1998, pp. 157-172.
21. Lin, Ping-Hsun, Lin, Hsiang Hsi, Oswald, Fred B., and Townsend, Dennis P.: *Using Dynamic Analysis for Compact Gear Design*, NASA-TM-1998-207419, ARL-TR-1818, ASME DETC98/PTG-5785, Presented at ASME Design Engineering Technical Conference, Atlanta, GA, Sep 13-16, 1998.
22. Lewicki, David G., Sane, Ashok, D., Drago, Raymond J., and Wawrzynek, Paul A.: *Three-Dimensional Gear Crack Propagation Studies*, NASA-TM-1998-208827, ARL-TR-1833, Presented at Fourth World Congress on Gearing and Power Transmission, Paris, FR, Mar 16-18, 1999
23. Samuel, P.D., Pines, D.J., and Lewicki, D.G., *Fault Detection in the OH-58A Main Transmission Using the Wavelet Transform*, Proceedings of the 52nd Meeting of the Society for Mechanical Failure Prevention Technology, Mar.-Apr 1998, pp. 323-335.
24. Samuel, P.D., Pines, D.J., and Lewicki, D.G., *A Comparison of Stationary and Non-Stationary Transforms for Early Fault Detection in the OH-58A Main Transmission*, Proceedings of the 54th American Helicopter Society International Forum, May 1998, pp. 867-887.
25. Lin, Hsiang Hsi, and Liou, Chuen-Huei: *A Parametric Study of Spur Gear Dynamics*, NASA-CR-1998-206598, ARL-CR-419, January 1998.
26. Cronkhite, J. Dickson, B., Martin, W., and Collingwood, G.: *Operational Evaluation of a Health and Usage Monitoring System (HUMS)*, NASA-CR-1998-207409, April 1998.

27. Fitz, Frank, and Gadd, Craig: *Design, Fabrication, and Testing of a High-Speed, Over-Running Clutch for Rotorcraft*, NASA-CR-1998-208513, August, 1998.
28. Henry, Zachary S. and Stapper, William R.: *Evaluation of Navy 9 cst Oil in Bell Helicopter M412 HP Gearboxes*, NASA-CR-1998-208517, ARL-CR-430, August, 1998.
29. Feng, P; Litvin, F.; Townsend, D. and Handschuh, R.: *Determination of Principal Curvatures and Contact Ellipse for Profile Crowned Helical Gears*, Journal of Mechanical Design, Vol. 121, No. 1, March 1999.
30. Wang, Keming; Yang, Dongzhe; Danai, Kourosh; Lewicki, David G.: *Model-Based Selection of Accelerometer Locations for Helicopter Gearbox Monitoring*, Journal of the American Helicopter Society, Pp. 269-275, Vol. 44, No. 3, October 1999.
31. Handschuh, R. F. and Bibel, G. D.: *Comparison of Experimental and Analytical Tooth Bending Stress of Aerospace Spiral Bevel Gears*, Journal of Mechanical Design, Pp. 565-578, Vol. 121, No. 4, December 1999.
32. Morales, W. and Handschuh, R.: *A Preliminary Study on the Vapor/Mist Phase Lubrication of a Spur Gearbox*, NASA TM-199-208833, ARL-TR-1912, Presented at the 1999 STLE Annual Meeting, Las Vegas, Nevada, May 24-27, 1999.
33. Handschuh, R. and Bibel, G.: *Comparison of Experimental and Analytical Tooth Bending Stress of Aerospace Spiral Bevel Gears*, NASA TM-1999-208903, ARL-TR-1891, Presented at the 4th World Congress on Gearing, Paris, France, March 16-18, 1999.
34. Decker, Harry J. and Zakrajsek, James J.: *Comparison of Interpolation Methods as Applied to Time Synchronous Averaging*, NASA TM-1999-209086, ARL-TR-1960, Presented at the 53rd Meeting of the Society for Machine Failure Prevention Technology, Virginia Beach, VA, April 19-22, 1999.
35. Lewicki, D.G.; Handschuh, R.F.; Heath, G.F.; and Sheth, V.: *Evaluation of Carburized and Ground Face Gears*, NASA TM-1999-209188, ARL-TR-1998, Presented at the 55th American Helicopter Society International Forum, May 1999.
36. Litvin, F.L.; De Donno, M.; Peng, A.; Vorontsov, A. and Handschuh, R.F.: *Enhanced Computer Aided Simulation of Meshing and Contact with Application for Spiral Bevel Gear Drives*, NASA TM-1999-209438 ARL-TR-2111.
37. Lewicki, David G.; Handschuh, Robert F.; Heath, Gregory F.; and Sheth, Vijay: *Evaluation of Carburized and Ground Face Gears*, Journal of the American Helicopter Society, Pp. 118-124, Vol. 45, No. 2, April 2000
38. Samuel, P.D., Pines, D.J., and Lewicki, D.G.: *A Comparison of Stationary and Non-Stationary Metrics for Detection Faults in Helicopter Gearboxes*, Journal of the American Helicopter Society, Pp. 125-136, Vol. 45, No. 2, Apr 2000

39. Lewicki, David G.; Handschuh, Robert F.; Heath, Gregory F.; and Sheth, Vijay: *Evaluation of Caburized [SIC] and Ground Face Gears*, Gear Technology, Pp. 36-42, Vol 17, No. 5, Sep/Oct 2000.
40. Dimofte, Florin; Proctor, Margaret P.; Fleming, David P. and Keith, Theo G., Jr.: *Wave Fluid Film Bearing Tests for an Aviation Gearbox*, NASA TM-2000-209766, Jan 2000, Presented at 8th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery, Honolulu, Hawaii
41. Pinel, Stanley I.; Signer, Hans R. and Zaretsky, Erwin V.: *Design and Operating Characteristics of High-Speed, Small-Bore Cylindrical-Roller Bearings*, NASA TM-2000-209778, Aug 2000, Presented at 2000 Annual Meeting sponsored by Society of Tribologists and Lubrication Engineers, Nashville, TN, May 2000.
42. Handschuh, Robert F. and Morales, Wilfredo: *Lubrication System Failure Baseline Testing on an Aerospace Quality Gear Mesh*, NASA TM-2000-209954, ARL-TR-2214, May 2000, DETC2000/PTG-209954, Presented at the 2000 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, Baltimore, MD, Sep 2000
43. Krantz, T.L.; Alanou, M.P.; Evans, H.P. and Snidle, R.W.: *Surface Fatigue Lives of Case-Carburized Gears With an Improved Surface Finish*, NASA TM-2000-210044, ARL-TR-2170, Apr 2000, DETC2000/PTG-14373, Presented at the 2000 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, Baltimore, MD, Sep 2000.
44. Padmasolala, Giri; Lin, Hsiang H. and Oswald, Fred B.; *Influence of Tooth Spacing Error on Gears With and Without Profile Modifications*, NASA TM-2000-210061 PTG-14436, October 2000, DETC2000/PTG-14436, Presented at the 2000 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, Baltimore, MD, Sep 2000.
45. Lewicki, David G., Spievak, Lisa E, Wawrzynek, Paul A., Ingraffea, Anthony R. and Handschuh, Robert F.: *Consideration of Moving Tooth Load in Gear Crack Propagation Predictions*, NASA TM-2000-210227, ARL-TR-2246, Jul 2000, DETC2000/PTG-14386, Presented at the 2000 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, Baltimore, MD, Sep 2000.
46. Paula J. Dempsey: *A Comparison of Vibration and Oil Debris Gear Damage Detection Methods Applied to Pitting Damage*, NASA TM-2000-210371, Sep 2000.
47. Litvin, F.L.; Egelja, A.; Tan, J.; Chen, D.Y-D. and Heath , G.: *Handbook on Face Gear Drives With a Spur Involute Pinion*, NASA CR-2000-209909, ARL-CR-447, Mar 2000.
48. Spievak, Lisa E.; Wawrzynek, Paul A. and Ingraffea, Anthony R.: *Simulating Fatigue Crack Growth in Spiral Bevel Gears*, NASA CR-2000-210062, ARL-CR-451, May 2000.
49. Litvin, Faydor L.; Feng, Pin-Hao and Lagutin, Sergei A.: *Computerized Generation and Simulation of Meshing and Contact of New Type of Novikov-Wildhaber Helical Gears*, NASA CR-2000-209415 ARL-CR-428, Oct 2000

50. Spievak, Lisa E.; Wawrynek, Paul A. and Ingraffea, Anthony R.: *Simulating Fatigue Crack Growth in Spiral Bevel Gears*, *Engineering Fracture Mechanics*, Vol 68, Pp. 53-76, 2001
51. Lewicki, David G.; Handschuh, Robert F.; Spievak, Lisa E.; Wawrynek, Paul A. and Ingraffea, Anthony R.: *Consideration of Moving Tooth Load in Gear Crack Propagation Predictions*, Journal of Mechanical Design, Vol. 123, No. 1, March 2001.
52. Litvin, Faydor L.; Fuentes, Alfonso; Hawkins, J. Matthew and Handschuh, Robert F.: *Design, Generation and Tooth Contact Analysis (TCA) of Asymmetric Face Gear Drive With Modified Geometry*, NASA TM-2001-210614, ARL-TR-2373, Jan. 2001.
53. Handschuh, Robert F.: *Testing of Face-Milled Spiral Bevel Gears at High-Speed and Load*, NASA TM-2001-210743, ARL-TR-2381, Mar. 2001, Presented at International Conference on Mechanical Transmissions, Chongqing China, Apr 5-8, 2001.
54. Lewicki, David G.: *Gear Crack Propagation Path Studies – Guidelines for Ultra-Safe Design*, NASA TM-2001-211073, ARL-TR-2468, Jul 2001, Presented at 57th Annual Forum of American Helicopter Society, Washington, DC, May 9-11, 2001.
55. Litvin, Faydor L.; Fan, Qi; Vecchiato, Daniele and Demenego, Alberto: *Computerized Generation and Simulation of Meshing of Modified Spur and Helical Gears Manufactured by Shaving*, NASA CR-2001-210893, ARL-CR-468, May 2001.
56. Litvin, Faydor L.; Fan, Qi and Fuentes, Alfonso: *Computerized Design, Generation and Simulation of Meshing and Contact of Face-Milled Formate Cut Spiral Bevel Gears*, NASA CR-2001-210894, ARL-CR-467, May 2001.
57. Parker, Robert G. and Lin, Jian: *Modeling, Modal Properties, and Mesh Stiffness Variation Instabilities of Planetary Gears*, NASA CR-2001-210939, ARL-CR-462, May 2001.